

ACTION CALENDAR 09/13/2022

To: Honorable Mayor and Members of the City Council

From: Councilmember Taplin

Subject: Equitable Safe Streets and Climate Justice Resolution

#### RECOMMENDATION

Adopt a resolution committing the expenditure of City and state/federal matching/recurring funds on city-maintained roads, sidewalks, and bike lanes to accelerate safety improvements in a manner consistent with City, State, and Federal policy on street safety, equity, accessibility, and climate change; refer to the City Manager fully integrate Complete Streets design as defined by the NACTO Urban Street Design Guide in the default engineering standard for city streets; restrict city use of the Manual on Uniform Traffic Control Devices (MUTCD) to only documented cases that require its use for compliance with Federal/State regulations; in all other cases, restrict use of the MUTCD to "engineering judgment."

#### POLICY COMMITTEE RECOMMENDATION

On June 1, 2022, the Facilities, Infrastructure, Transportation, Environment & Sustainability Committee adopted the following action: M/S/C (Robinson/Taplin) to send the item to Council with a positive recommendation. Vote: Ayes – Taplin, Robinson; Noes – None; Abstain – None; Absent – Harrison.

#### FINANCIAL IMPLICATIONS

According to the Federal Highway Administration:

"It is generally significantly less expensive to install safety improvements as part of a resurfacing project than to build it as a standalone project ... The cost for adding bike lanes during a resurfacing project costs approximately 40 percent of the cost of adding the lanes as a standalone project."

<sup>&</sup>lt;sup>1</sup> https://www.fhwa.dot.gov/environment/bicycle\_pedestrian/publications/resurfacing/page04.cfm#cost\_a2

This resolution calls for the full integration of safety features at the time of re-paving of all streets in the city, in a manner consistent with City, State,<sup>2</sup> and Federal<sup>3</sup> policy, which will result in substantial material and staff time savings, while also saving the lives of Berkeley residents.

## **CURRENT SITUATION AND ITS EFFECTS**

Under current practices in Berkeley, safe streets interventions like bikeways, separated lanes, raised pedestrian crossings, and corner bulb-outs are often implemented only after a pedestrian or cyclist has been injured or killed by a driver. Many examples exist of streets that had been recently re-paved without safety features that were then redesigned after residents expressed their anger over pedestrians and cyclists being severely injured or killed by a driver.

According to the Federal Highway Administration, implementing safe streets features at the time of re-paving, rather than as stand-alone, post-facto projects, can significantly cut the costs of these safety interventions.<sup>4</sup> This resolution calls for the full integration of safety features at the time of re-paving of all streets in the city, which will result in substantial material and staff time savings, while also saving the lives of Berkeley residents.

The Equitable Safe Streets and Climate Justice Resolution is a Strategic Plan Priority Project, advancing our goal to provide state-of-the-art, well-maintained infrastructure, amenities, and facilities.

#### **BACKGROUND**

Personal cars and trucks are the leading source of climate pollution in the City of Berkeley, causing 59% of all greenhouse gasses within city limits – more than all residential and commercial energy use, combined.<sup>5</sup> They are also among the leading causes of violent injury and death in the city, with a growing number of deadly and injurious conflicts between people driving cars and vulnerable road users including pedestrians, the elderly, residents who use mobility devices, and bicyclists. Lower income Berkeley residents and people of color are disproportionately impacted by the risk of traffic injuries and fatalities.<sup>6</sup>

<sup>&</sup>lt;sup>2</sup> "Caltrans to Require 'Complete Streets' Features in Planning and Design of All New Projects https://dot.ca.gov/news-releases/news-release-2021-039

<sup>&</sup>lt;sup>3</sup> Under the Infrastructure Investment and Jobs Act of 2021, "MPOs must use 2.5 percent of their overall funding to develop and adopt complete streets policies, active transportation plans, transit access plans, transit-oriented development plans, or regional intercity rail plans." <a href="https://nacto.org/program/state-and-federal-policy/">https://nacto.org/program/state-and-federal-policy/</a>

<sup>&</sup>lt;sup>4</sup> https://www.fhwa.dot.gov/environment/bicycle\_pedestrian/publications/resurfacing/page04.cfm#cost\_a2

<sup>&</sup>lt;sup>5</sup> https://www.cityofberkeley.info/Clerk/City\_Council/2020/07\_Jul/Documents/2020-07-21 Presentations Item 5 (6pm) Pres CMO pdf.aspx

<sup>&</sup>lt;sup>6</sup> Berkeley Vision Zero Action Plan, March 10, 2019, page 13.

Berkeley also has among the highest percentages of people who take transit, walk, and ride bicycles of any city of its size in the United States.<sup>7</sup> In spite of this fact, most of our streets are designed in such a way that makes them unsafe for pedestrians, transit users, or for use by people who use mobility devices or bicycles.

This disparity can be resolved through better engineering and design of our city streets, which will save lives and often result in substantial savings for the city. In addition, new state legislation (AB-43, 2021) recognizes that high vehicle speeds are a primary factor in deadly and dangerous street conditions, and empowers California cities to lower speed limits on certain city streets to reduce traffic collisions and protect vulnerable road users.<sup>8</sup>

## Recent History: Safety Measures Follow Tragedy, Increase Costs

According to the Federal Highway Administration:

"It is generally significantly less expensive to install safety improvements as part of a resurfacing project than to build it as a standalone project ... The cost for adding bike lanes during a resurfacing project costs approximately 40 percent of the cost of adding the lanes as a standalone project."

Over the past several years, safety conditions for Berkeley residents and visitors who do not drive have deteriorated, as evidenced by the growing number of crashes in Berkeley that have resulted in pedestrian and cyclist injury or death. <sup>10</sup> In spite of the deaths and injuries on our streets, these crashes often do not result in safety improvements.

However, when local residents express sufficient outrage to City Hall over deadly conditions, the City sometimes rapidly responds with permanent or semi-permanent safety features – but had these features preceded, rather than followed, the crashes, they would have resulted in both lower costs to the city, and fewer traumatic injuries and deaths.

Examples of recent Berkeley street re-paving projects that led to increased costs due to a lack of safety features include:

 Fulton (Oxford): In 2015, Berkeley Public Works repaved Fulton/Oxford Street between Bancroft Way and Dwight, but did not add a safe bikeway as called for in Berkeley's 2000 Bicycle Plan. Shortly afterward, Megan Schwarzman was hit

<sup>&</sup>lt;sup>7</sup> https://www.vitalsigns.mtc.ca.gov/commute-mode-choice

<sup>&</sup>lt;sup>8</sup> Assembly Bill 43, Traffic Safety, 2021 https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill\_id=202120220AB43

 $<sup>^{9}\,</sup>https://www.fhwa.dot.gov/environment/bicycle\_pedestrian/publications/resurfacing/page04.cfm\#cost\_a2$ 

<sup>&</sup>lt;sup>10</sup> https://www.sfchronicle.com/local/article/Berkeley-bicycle-activist-struck-by-car-hours-16037329.php

and severely injured by a driver while bicycling.<sup>11</sup> After being pressured by the community to act, the City Council directed staff to re-stripe the roadway with a safer bikeway, adding 3 months of unplanned work and staff time. Costs would have been lower if the bikeway had been planned and implemented in a manner more consistent with existing city policy, and concurrent with re-paving.

- Hearst: After adoption of the 2000 Berkeley Bicycle Plan, Berkeley Public Works repaved Hearst Avenue, but did not include a safe bikeway, as called for in the Bicycle Plan. After years of pressure from residents concerned about street safety, Berkeley finally rebuilt and repaved the street in 2016 with safer facilities, and at significant cost. Costs would have been lower if the bikeway had been planned and implemented in a manner consistent with existing city policy, and concurrent with re-paving.
- Milvia Street: Berkeley repaved Milvia Street downtown using Measure BB funds (2014), and then in 2019, repaved Milvia Street in south Berkeley. But neither repaving included safe streets interventions called for in the then-approved bike plans. Berkeley then added extensive safe bicycling facilities in 2021/2022. Costs would have been lower if the bikeway had been planned and implemented in a manner consistent with existing city policy, and concurrent with re-paving.
- Dwight/California: In 2021, Berkeley embarked on safety improvements at the corner of Dwight and California, a "bicycle boulevard" and a "safe route to school," after local residents expressed outrage over two children who were struck by drivers on their way to school. California and Dwight Streets were resurfaced in 2015, but did not include enhancements to improve pedestrian and cyclist crossing conditions at this intersection.
- Concrete diagonal diverters: Berkeley installed many concrete diagonal
  diverters back in the 1970's, and had to come back later with separate concrete
  work to make bicycle cut-throughs in these diverters for bikes to access
  neighborhood streets. Costs would have been lower if the cut-throughs had been
  included in the original design.

# Street Safety First: Berkeley City Policy

In recent years, the traffic engineering profession has developed extensive tools and engineering guidelines for cities that seek to safely meet the mobility needs of all residents, including those who drive cars, walk, use mobility devices, ride bicycles, and/or use transit.

Many of these new tools, such as the Urban Streets Design Guide by the National Association of City Transportation Officials (NACTO), provide turnkey solutions for cities seeking to design and engineer roads to improve street safety for all road users. The Design Guide was developed in part to help cities seeking to enhance safety, and in part out of growing concern over the proven inadequacy of the Federal Highway

<sup>&</sup>lt;sup>11</sup> Raguso, E. (2016). Bike lane opens by near-fatal crash site. *Berkeleyside*. Retrieved from <a href="https://www.berkeleyside.org/2016/05/12/bike-lane-opens-in-berkeley-by-near-fatal-crash-site-no-charges-filed-yet-against-driver-who-police-say-was-high">https://www.berkeleyside.org/2016/05/12/bike-lane-opens-in-berkeley-by-near-fatal-crash-site-no-charges-filed-yet-against-driver-who-police-say-was-high</a>

Administration's Manual on Uniform Traffic Control Devices (MUTCD), which has led to dangerous and deadly conditions for vulnerable road users. 121314

In fact, in several cases, the proscriptions of the MUTCD have delayed or precluded street safety improvements in Berkeley.<sup>15</sup> Part of the reason may be that, under current case law, engineers may sometimes be held personally liable for deaths or injuries that can be proven to be the result of street engineering and design.

Over the past year, both the Federal Highway Administration<sup>1617</sup> and Caltrans<sup>18</sup> have issued guidance that allows city traffic engineers to use NACTO's Urban Streets Design Guide in place of the MUTCD for projects that use Federal or State transportation funds. In addition, FHWA has issued guidance that, in states where vulnerable road users make up 15% or more of the total number of fatalities in a state in a given year, the state is required to dedicate at least 15% of its Highway Safety Improvement Program funds the following fiscal year to projects that address the safety of these road users. Additionally, the new guidance incorporates legislative changes to permit 100% Federal funding for certain pedestrian and bicyclist projects.<sup>19</sup>

## **Adopt New Complete Streets Engineering Guidelines**

This resolution directs all City departments with a role in the design, engineering, maintenance, and administration of Berkeley surface streets to formally adopt the NACTO Urban Streets Design Guide as the primary design and engineering manual for Berkeley city streets.

The resolution further directs all City departments to restrict use of the MUTCD, which has been proven to lead to unsafe street designs,<sup>20</sup> to only those projects where the Public Works Director certifies, in writing, that the MUTCD is better suited to achieving the City's goal of reducing vehicle speeds, enhancing safety features for pedestrians,

<sup>&</sup>lt;sup>12</sup> Schmitt, A. (2021). Let's Throw Away These Rules of the Road. *Bloomberg*. Retrieved from <a href="https://www.bloomberg.com/news/articles/2021-05-05/it-s-time-to-rewrite-the-road-builders-rule-book">https://www.bloomberg.com/news/articles/2021-05-05/it-s-time-to-rewrite-the-road-builders-rule-book</a>

<sup>&</sup>lt;sup>13</sup> National Association of City Transportation Officials. (2021). 25,000 Comments Calling for Safety and Equity Reforms to Once-Obscure Federal Street Manual. *NACTO*. Retrieved from <a href="https://nacto.org/2021/05/20/25000-comments-call-for-reforming-mutcd/">https://nacto.org/2021/05/20/25000-comments-call-for-reforming-mutcd/</a>

Shill, G. & Bronin, S. (2021). Rewriting Our Nation's Deadly Traffic Manual. *Harvard Law Review*.
 Retrieved from <a href="https://harvardlawreview.org/2021/10/rewriting-our-nations-deadly-traffic-manual/">https://harvardlawreview.org/2021/10/rewriting-our-nations-deadly-traffic-manual/</a>
 Harrington, T. (2021). Berkeley's plans to make Dwight and California safer get mixed reviews.
 *Berkeleyside*. Retrieved from <a href="https://www.berkeleyside.org/2021/05/16/berkeleys-plans-to-make-dwight-and-california-safer-get-mixed-reviews">https://www.berkeleyside.org/2021/05/16/berkeleys-plans-to-make-dwight-and-california-safer-get-mixed-reviews</a>

<sup>&</sup>lt;sup>16</sup> "National Roadway Safety Strategy," US Department of Transportation, Jan 2022 https://www.transportation.gov/NRSS

<sup>17&</sup>quot;Bicycle and Pedestrian Facility Design Flexibility," US Department of Transportation - FHWA, Aug 2013 <a href="https://www.fhwa.dot.gov/environment/bicycle\_pedestrian/guidance/design\_flexibility.cfm">https://www.fhwa.dot.gov/environment/bicycle\_pedestrian/guidance/design\_flexibility.cfm</a>
18 "Caltrans to Require 'Complete Streets' Features in Planning and Design of All New Projects," Dec 20, 2021 <a href="https://dot.ca.gov/news-releases/news-release-2021-039">https://dot.ca.gov/news-releases/news-release-2021-039</a>

<sup>&</sup>lt;sup>19</sup> https://safety.fhwa.dot.gov/hsip/rulemaking/docs/BIL\_HSIP\_Eligibility\_Guidance.pdf

<sup>&</sup>lt;sup>20</sup> See footnote 12.

cyclists, and people who use mobility devices, and ending traffic conflicts between cars and other road users.

In all cases where the MUTCD must be used, all City departments shall first exercise "engineering judgment," as defined in the MUTCD, to ensure safe street designs, including such judgment as may result in modification or overruling of MUTCD standards. In cases where "engineering judgment" can not be used to reduce vehicle speeds or otherwise enhance street safety conditions for all road users, all City departments shall issue formal findings, approved by the Public Works director, that document why a street can not be made safe for all road users, and vehicle speed and throughput must be prioritized.

The resolution directs city departments to ensure that all requests for funding related to any project, on any surface street, sidewalk, bicycle facility, or other transportation infrastructure within city borders, prioritize and implement designs that ensure the safety of vulnerable users who are not in private automobiles, as established in numerous past policy directives of the Berkeley City Council.<sup>21</sup>

This resolution further prohibits all City departments from spending any city financial resources on any street that does not include the "best in class" design for Complete Streets unless the safety benefits are outweighed by other considerations.

It further prohibits City departments from requiring traffic studies or other measurements related to impacts on "Level of Service" (vehicle speed/throughput) in consideration of street safety improvements, if such improvements will either a) improve safe travel conditions for vulnerable road users, or b) reduce Vehicle Miles Traveled, as established by State of California<sup>22</sup> and City of Berkeley climate and land use policies, or c) if such improvements are otherwise consistent with guidance in the Complete Streets provisions of NACTO and Caltrans.

It further directs all departments to maintain the priority of street safety interventions in situations where budget is a limiting factor in street repair/improvements, by prioritizing the use of "quick build" approaches which improve street safety via rapidly-deployed, lower-cost, temporary measures.

<sup>&</sup>lt;sup>21</sup> e.g. Berkeley Bicycle Plan, 2017; Berkeley Pedestrian Plan, 2020; BIBIMBAP [https://www.cityofberkeley.info/Clerk/City Council/2019/10 Oct/Documents/2019-10-29 Item 31 Referral Develop a Bicycle Lane - Rev (2).aspx]; Berkeley Pedestrian Safety Report 1998; Downtown Area Plan, 2012; West Berkeley Plan, 1993; Adeline Corridor Specific Plan (in progress); University Avenue Plan, 1996.

<sup>&</sup>lt;sup>22</sup> California Senate Bill 743, passed in 2013, mandates that jurisdictions can no longer use automobile delay – commonly measured by Level of Service (LOS) – in transportation analysis under the California Environmental Quality Act (CEQA). Full implementation was delayed until 2019. https://www.vta.org/projects/level-service-los-vehicle-miles-traveled-vmt-transition

<sup>&</sup>lt;sup>23</sup>"Quick build" projects are reversible, adjustable traffic safety improvements that can be installed relatively quickly. Unlike major capital projects that may take years to plan, design, bid and construct, quick-build projects are constructed within weeks or months and are intended to be evaluated and

#### Definitions:

Complete Streets: On December 11, 2012, Berkeley City Council adopted a
Complete Streets Policy (Resolution 65,978-N.S.) to guide future street design
and repair activities. "Complete Streets," describes a comprehensive, integrated
transportation network with infrastructure and design that allows safe and
convenient travel along and across streets for all users, including pedestrians,
bicyclists, persons with disabilities, motorists, movers of commercial goods,
users and operators of public transportation, emergency vehicles, seniors,
children, youth, and families.<sup>24</sup>

- NACTO Urban Street Design Guide: An engineering manual for cities that adopt Complete Streets policies.
- <u>Level of Service</u> (LOS): A discontinued method of evaluating transportation infrastructure projects based on vehicle speed and throughput; SB 743, passed in 2013, prohibited LOS in CEQA analysis in the State of California, but the law is under-enforced and LOS is still commonly used.
- Vehicle Miles Traveled (VMT): A measure of the impact of car use on air quality and street safety based on the number of miles traveled by car. It is longstanding policy of the City of Berkeley and the State of California to reduce VMT to achieve climate and safe streets policies.
- MUTCD: The Manual on Uniform Traffic Control Devices. This controversial
  manual has been blamed for dangerous street designs throughout the United
  States. Federal and State transportation authorities are in the process of revising
  it, and have encouraged jurisdictions that seek to accelerate progress on safe
  streets to use other engineering and street design guidelines.

## **ENVIRONMENTAL SUSTAINABILITY AND CLIMATE IMPACTS**

While cars represent the majority of the climate pollution within the city at 59%, Berkeley also has a very high mode share<sup>25</sup> among residents and visitors who walk, ride transit, use mobility devices, and ride bicycles. These modes of travel are the lowest-carbon options available, and the City has many policies focused on incentivizing and increasing their use.

However, abundant research about mode choice shows that people hesitate to shift to more sustainable forms of mobility in areas with deadly and dangerous car traffic – which describes most of the City of Berkeley.<sup>26</sup>

reviewed within the initial 24 months of construction. <a href="https://www.sfmta.com/vision-zero-quick-build-projects">https://www.sfmta.com/vision-zero-quick-build-projects</a>

<sup>&</sup>lt;sup>24</sup> https://www.cityofberkeley.info/completestreetspolicy/

<sup>&</sup>lt;sup>25</sup> https://www.cityofberkeley.info/uploadedFiles/Public\_Works/Level\_3\_-\_Transportation/Berkeley-Bicycle-Plan-2017-Executive%20Summary.pdf

<sup>&</sup>lt;sup>26</sup> Raguso, E. (2020). Berkeleyside interactive maps: Cyclist and pedestrian injury crashes in 2019. *Berkeleyside*. Retrieved from <a href="https://www.berkeleyside.org/2020/01/28/berkeleyside-interactive-maps-cyclist-and-pedestrian-injury-crashes-in-2019">https://www.berkeleyside.org/2020/01/28/berkeleyside-interactive-maps-cyclist-and-pedestrian-injury-crashes-in-2019</a>

In addition to having a high mode share for non-car modes, Berkeley also has among the highest rates, per capita, of traffic violence involving people not in cars. The correlation is direct: Our unsafe streets are harming people, and preventing the city from achieving its goals on both climate action, and safe mobility.

## CONTACT PERSON

Councilmember Taplin Council District 2 510-981-7120

## **ATTACHMENTS**

- 1. Resolution
- 2. City of Palo Alto resolution adopting the NACTO Urban Bikeway Design Guide
- 3. City of Oakland Public Works Director letter of endorsement of NACTO Urban Street Design Guide
- 4. Assembly Bill 43 (2021)

## RESOLUTION NO. ##,###-N.S.

#### EQUITABLE SAFE STREETS AND CLIMATE JUSTICE RESOLUTION

WHEREAS, Berkeley's climate action plan calls for an 80% reduction in climate pollution by 2050, and private automobiles represent 59% of the City's climate pollution; and

WHEREAS, progress on Berkeley's climate action plan will depend in large part on reducing "vehicle miles traveled," or the amount people drive private cars within city limits; and

WHEREAS, Berkeley's bicycle plan proposed in 1971 called for a city-wide network of safe bicycle routes; and

WHEREAS, Berkeley adopted an action plan for Vision Zero in 2019; and

WHEREAS, Berkeley's existing policy on street engineering and safety calls for "Complete Streets" as defined by the National Association of City Transportation Officials (NACTO);

NOW THEREFORE, BE IT RESOLVED by the City Council of the City of Berkeley that any and all funds that are to be used for the design of major roadway projects such as roadway reconstruction/repaving of more than one city block of city streets and related facilities shall only be disbursed for projects that fully integrate Complete Streets (as defined by NACTO) and all feasible safety interventions designed to reduce automobile speed and protect the lives of people outside of automobiles;

BE IT FURTHER RESOLVED that in all cases where Complete Streets can not be fully implemented, or in cases where the MUTCD must be used in place of the NACTO Urban Streets Design Guide, City Staff shall use "engineering judgment" to prioritize the safety of vulnerable road users, and not rely on MUTCD "warrants" and other proscriptions;

BE IT FURTHER RESOLVED that pursuant to AB-43 (2021), no city official shall apply the "85th percentile" rule in the process of setting speed limits on city streets, but rather, determine via safety studies and other documented engineering findings by the Public Works Director, when higher speeds are appropriate and are the safest option for all road users, provided however, that all criteria for setting local speed limits set forth in the California Vehicle Code, including Sections 22358.6 to 22358.9, are complied with in setting speed limits, even if inconsistent with this clause.



# City of Palo Alto City Council Staff Report

(ID # 6222)

Report Type: Consent Calendar Meeting Date: 10/26/2015

**Summary Title: Adoption of NACTO Design Guidelines** 

Title: Adoption of a Resolution to Adopt the National Association of City

**Transportation Officials (NACTO) Design Guidelines** 

From: City Manager

**Lead Department: Planning and Community Environment** 

#### Recommendation

Adopt the proposed Resolution (Attachment A) to adopt the National Association of City Transportation Officials (NACTO) Urban Street Design Guide and Urban Bikeway Design Guide as supplements to the City of Palo Alto Bicycle and Pedestrian Plan.

# **Executive Summary**

Adopting the National Association of City Transportation Officials (NACTO) street design guides will provide additional support in the City's efforts to introduce complete street ideas into the design and operation of streets by providing design guidance on transportation infrastructure. City staff will continue to work proactively with the community to provide convenient, safe, and context-sensitive facilities that promote increased use by people who walk and bicycle. When NACTO guidance or other design guidance is used, the City will continue to utilize sound planning and engineering judgment when determining the best solution for a local need.

## **Background**

Streets often fail to provide their surrounding communities with a space where people can safely walk, bicycle, drive, take transit, and socialize. Complete Streets integrates people and place in the planning, design, construction, operation, and maintenance of our transportation networks. Cities are leading the movement to redesign and reinvest in our streets as cherished public spaces for people, as well as critical arteries for traffic.

The National Association of City Transportation Officials (NACTO) facilitates the exchange of transportation ideas, insights and best practices among cities, while fostering a cooperative approach to key issues facing cities and metropolitan areas. The NACTO Urban Street Design Guide and Urban Bikeway Design Guide offer a vision for improving the safety and livability of our streets for people who walk, bicycle, drive, and ride transit. The guidance and flexibility

articulated in these guides serve as an additional tool for planning modern city streets to safely accommodate current and future residents, workers and visitors within limited space.

In September 2014, Governor Jerry Brown signed Assembly Bill 1193, the Protected Bikeways Act. AB 1193 eliminates a requirement previously imposed on local agencies to follow Caltrans bikeway design rules on local streets and roads. AB 1193 grants cities flexibility to use alternative design standards, such as those published by the National Association of City Transportation Officials (NACTO), on locally-owned streets and roads. Prior to utilizing alternative designs, the law requires all of the following conditions be met:

- (1) The alternative criteria have been reviewed and approved by a qualified engineer with consideration for the unique characteristics and features of the proposed bikeway and surrounding environs.
- (2) The alternative criteria, or the description of the project with reference to the alternative criteria, are adopted by resolution at a public meeting, after having provided proper notice of the public meeting and opportunity for public comment.
- (3) The alternative criteria adhere to guidelines established by a national association of public agency transportation officials.

#### Discussion

The City of Palo Alto Comprehensive Plan, Climate Action Plan, and Bicycle and Pedestrian Transportation Plan establish clear support and priority for investing in non-motorized transportation, improving access to transit, and reducing dependence on single-occupant vehicles to improve the overall efficiency of the transportation system.

The passage of the Protected Bikeways Act in September 2014 requires that if a local agency wishes to use an alternative design standard, that this design standard be adopted by resolution at a public meeting.

Adopting the NACTO street design guides will provide additional support in the City's efforts to introduce complete street ideas into the design and operation of streets by providing design guidance on transportation infrastructure. City staff will continue to work proactively with the community to provide convenient, safe, and context-sensitive facilities that promote increased use by people who walk and bicycle. When NACTO guidance or other design guidance is used, the City will continue to utilize sound planning and engineering judgment when determining the best solution for a local need.

Attachment A provides a proposed Resolution to adopt the NACTO Design Guidelines.

The NACTO Guides may be reviewed or ordered online as outlined in Attachment B. A hardcopy is available *for review only* at the City of Palo Alto Transportation Division, 250 Hamilton Avenue, 5<sup>th</sup> floor.

#### NACTO Urban Bikeway Design Guide

The NACTO Urban Bikeway Design Guide is based on the experience of the best cycling cities in the world. To create the guide, the authors conducted a worldwide literature search of design guidelines and real-life experience and worked closely with a panel of planning professionals from NACTO member cities, as well as traffic engineers, planners, and academics.

Most of these treatments are not directly referenced in the current version of the AASHTO Guide to Bikeway Facilities, although they are virtually all (with two exceptions) permitted under the Manual on Uniform Traffic Control Devices (MUTCD). The MUTCD is published by the Federal Highway Administration (FHWA) to define the standards used by road managers nationwide to install and maintain traffic control devices on all public streets, highways, bikeways, and private roads open to public travel. The MUTCD, which has been administered by the FHWA since 1971, is a compilation of national standards for all traffic control devices, including road markings, highway signs, and traffic signals. It is updated periodically to accommodate the nation's changing transportation needs and address new safety technologies, traffic control tools and traffic management techniques.

In August 2013, the Federal Highway Administration issued a memorandum officially supporting use of the NACTO Urban Bikeway Design Guide. All of the NACTO Urban Bikeway Design Guide treatments are in use internationally and in many cities around the United States.

For each treatment in the Urban Bikeway Design Guide, NACTO provides three levels of guidance:

- Required: elements for which there is a strong consensus that the treatment cannot be implemented without.
- Recommended: elements for which there is a strong consensus of added value.
- Optional: elements that vary across cities and may add value depending on the situation.

NACTO emphasizes that treatments must be tailored to the individual situation with thorough documentation of decisions. To assist with this, the NACTO Urban Bikeway Design Guide links to companion reference material and studies.

#### Palo Alto Pedestrian and Bicycle Advisory Committee Review

Staff brought a draft proposed Resolution to the Palo Alto Pedestrian and Bicycle Advisory Committee (PABAC) for input on August 4, 2015. PABAC members suggested minor edits to the Resolution which have been incorporated by staff. On September 1, 2015, PABAC reviewed the revised Resolution and passed a unanimous motion recommending adoption of the NACTO guidelines by the City Council.

## Planning and Transportation Commission Review

On September 9, 2015, the Planning and Transportation Commission unanimously recommended the City Council adopt the Resolution adopting the NACTO guidelines.

## **Resource Impact**

Adopting the NACTO Design Guidelines will give the City flexibility in designing bicycle and pedestrian facilities. There is no definable impact on the cost of future capital projects.

# **Policy Implications**

Adoption of the NACTO Design Guides as supplementary guidelines is consistent with the Comprehensive Plan, Bicycle + Pedestrian Transportation Plan, and Climate Action Plan.

#### **Environmental Review**

Adoption of this resolution does not meet the definition of a project, therefore no environmental review is required.

#### **Attachments:**

- Attachment A: Resolution to Adopt NACTO Urban Street and Bikeway Design Guidelines (PDF)
- Attachment B: Design Guides (PDF)

#### NOT YET APPROVED

Resolution No. \_\_\_\_\_
Resolution of the Council of the City of Palo Alto Adopting the National
Association of City Transportation Officials Urban Street Design and Bikeway
Design Guidelines

#### RECITALS

- A. The City of Palo Alto Comprehensive Plan, Climate Action Plan, and Bicycle and Pedestrian Plan establish clear support and priority for investing in non-motorized transportation, improving access to transit, and reducing dependence on single-occupant vehicles to improve the overall efficiency of the transportation system.
- B. The National Association of City Transportation Officials (NACTO) Urban Street Design Guide available at <a href="http://nacto.org/publication/urban-street-design-guide">http://nacto.org/publication/urban-street-design-guide</a> and Urban Bikeway Design Guide available at <a href="http://nacto.org/publication/urban-bikeway-design-guide/">http://nacto.org/publication/urban-bikeway-design-guide/</a> offers supplementary guidance on complete streets to cities nationally.
- C. The NACTO Urban Street Design Guide and Urban Bikeway Design Guide offer a vision for improving the safety and livability of our streets for people who walk, bicycle, drive, and ride transit. The guidance and flexibility articulated in these guides serve as an additional tool for planning modern city streets to safely accommodate current and future residents, workers and visitors within limited space.
- D. The State Department of Transportation (Caltrans) has endorsed NACTO guides to "put additional tools in the tool box for both Caltrans staff and local agencies to reference when making project decisions on facilities for which they are responsible."
- E. The NACTO Urban Street Design Guide and Urban Bikeway Design Guide are intended as supplemental guidelines and do not create mandatory requirements.
- F. The City of Palo Alto will work proactively with the community to provide convenient, safe, and context-sensitive facilities that promote increased use by people who walk and bicycle.
- G. When NACTO guidance or other design guidance is utilized, the City of Palo Alto will continue to utilize sound planning and engineering judgment when determining the best solution for a local need.
- H. The Palo Alto Pedestrian and Bicycle Advisory Committee and Planning and Transportation Commission have transmitted their recommendations.

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#### **NOT YET APPROVED**

NOW, THEREFORE, the Council of the City of Palo Alto RESOLVES as follows:

<u>SECTION 1</u>. The Council hereby adopts the NACTO Urban Street Design Guide and Urban Bikeway Design Guide referenced in Paragraph B above, and as amended from time to time, as supplements to the City of Palo Alto Bicycle Plan.

<u>SECTION 2</u>. The Council finds that the adoption of this resolution does not meet the definition of a project under Public Resources Code Section 21065, thus, no environmental assessment under the California Environmental Quality Act is required.

INTRODUCED AND PASSED:	
AYES:	
NOES:	
ABSENT:	
ABSTENTIONS:	
ATTEST:	
City Clerk	Mayor
APPROVED AS TO FORM:	APPROVED:
Senior Assistant City Attorney	City Manager
	Director of Planning and Community Environment
	Director of Administrative Services

NACTO Urban Street Design Guide

Please visit:

http://nacto.org/publication/urban-street-design-guide/

NACTO Urban Bikeway Design Guide

Please visit:

http://nacto.org/publication/urban-bikeway-design-guide/



#### 250 FRANK H. OGAWA PLAZA OAKLAND, CALIFORNIA 94612-2033

Public Works Agency Brooke A. Levin Interim Agency Director (510) 238-3961 FAX (510) 238-6428 TDD (510) 238-7644

December 16, 2013

Janette Sadik-Khan National Association of City Transportation Officials (NACTO) 55 Water Street, Floor 9 New York, NY 10041

RE: Letter of Endorsement for the NACTO Urban Street Design Guide

Dear Ms. Sadik-Khan:

On behalf of the City of Oakland, I am writing to express support for the National Association of City Transportation Officials (NACTO) *Urban Street Design Guide*, and endorse the Guide's use in the design of Oakland streets.

The Guide represents a vision for world-class city street design that matches Oakland's leadership goals and community desires. Urban transportation is in the midst of unprecedented change as the demands placed upon our streets and the needs of our citizens require an increasingly multimodal transportation network. Pressures, from public health to climate change to mobile technology, are redefining urban streets and opening opportunities for innovation.

The *Urban Street Design Guide* offers concrete guidance to meet these challenges and improve the safety and livability of our streets for pedestrians, bicyclists, drivers, and transit users. City streets demand a unique approach that are often not adequately addressed by conventional design guidelines. In Oakland, we value NACTO's role in developing targeted national guidance that allows local agencies to design and implement more successful projects. The *Urban Street Design Guide* provides a new and important direction for cities, and will be an indispensable tool in planning and designing Oakland's streets.

As such, the City of Oakland officially adopts the NACTO *Urban Street Design Guide* as an integral and effective tool for designing streets and public spaces.

Sincerely,

Brooke A. Levin

Interim Director, Public Works Agency

cc: Michael J. Neary, Assistant Director, Department of Engineering and Construction

#### Assembly Bill No. 43

#### CHAPTER 690

An act to amend Sections 627, 21400, 22352, 22354, 22358, and 40802 of, and to add Sections 22358.6, 22358.7, 22358.8, and 22358.9 to, the Vehicle Code, relating to traffic safety.

[Approved by Governor October 8, 2021. Filed with Secretary of State October 8, 2021.]

#### LEGISLATIVE COUNSEL'S DIGEST

AB 43, Friedman. Traffic safety.

(1) Existing law establishes various default speed limits for vehicles upon highways, as specified. Existing law authorizes state and local authorities to adjust these default speed limits, as specified, based upon certain findings determined by an engineering and traffic survey. Existing law defines an engineering and traffic survey and prescribes specified factors that must be included in the survey, including prevailing speeds and road conditions. Existing law authorizes local authorities to consider additional factors, including pedestrian and bicyclist safety.

This bill would authorize local authorities to consider the safety of vulnerable pedestrian groups, as specified.

(2) Existing law establishes a prima facie speed limit of 25 miles per hour on any highway, other than a state highway, located in any business or residence district, as defined. Existing law authorizes a local authority to change the speed limit on any such highway, as prescribed, including erecting signs to give notice thereof.

This bill would establish a prima facie speed limit of 25 miles per hour on state highways located in any business or residence district and would authorize the Department of Transportation (Caltrans) to change the speed limit on any such highway, as prescribed, including erecting signs to give notice thereof.

(3) Existing law establishes a speed limit of 65 miles per hour on state highways, as specified. Existing law authorizes Caltrans to declare a speed limit on any such highway, as prescribed, of 60, 55, 50, 45, 40, 35, 30, or 25 miles per hour, including erecting signs to give notice thereof. Existing law also authorizes a local authority, on a section of highway, other than a state highway, where the speed limit is 65 miles per hour to declare a lower speed limit, as specified.

This bill would additionally authorize Caltrans and a local authority to declare a speed limit of 20 or 15 miles per hour, as specified, on these highways.

(4) Existing law authorizes a local authority, without an engineering and traffic survey, to declare a lowered speed limit on portions of highway, as

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specified, approaching a school building or school grounds. Existing law limits this authority to sections of highway meeting specified requirements relating to the number of lanes and the speed limit of the highway before the school zone.

This bill would similarly authorize a lowered speed limit on a section of highway contiguous to a business activity district, as defined, and would require that certain violations be subject to a warning citation, for the first 30 days of implementation.

(5) Existing law requires Caltrans, by regulation, to provide for the rounding up or down to the nearest 5 miles per hour increment of the 85th percentile speed of free-flowing traffic on a portion of highway as determined by a traffic and engineering survey. Existing law requires the Judicial Council to create and implement an online tool by June 30, 2024, for the adjudication of traffic infractions, among other things.

This bill would authorize a local authority to further reduce the speed limit, as specified, and require that certain violations be subject to a warning citation, for the first 30 days of implementation. The bill would, in some circumstances, authorize the reduction of a speed limit beginning June 30, 2024, or when the Judicial Council has developed an online tool for adjudicating traffic infraction violations, whichever is sooner. The bill would require Caltrans to accordingly revise the California Manual on Uniform Traffic Control Devices, as specified.

(6) Existing law defines a speed trap and prohibits evidence of a driver's speed obtained through a speed trap from being admissible in court in any prosecution against a driver for a speed-related offense. Existing law deems a road where the speed limit is not justified by a traffic and engineering survey conducted within the previous 7 years to be a speed trap, unless the roadway has been evaluated by a registered engineer, as specified, in which case the speed limit remains enforceable for a period of 10 years. Existing law exempts a school zone, as defined, from certain provisions relating to defining a speed trap.

This bill would extend the period that a speed limit justified by a traffic and engineering survey conducted more the 7 years ago remains valid, for purposes of speed enforcement, if evaluated by a registered engineer, as specified, to 14 years.

This bill would also exempt a senior zone and business activity district, as defined, from those provisions.

The people of the State of California do enact as follows:

SECTION 1. Section 627 of the Vehicle Code is amended to read:

627. (a) "Engineering and traffic survey," as used in this code, means a survey of highway and traffic conditions in accordance with methods determined by the Department of Transportation for use by state and local authorities.

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- (b) An engineering and traffic survey shall include, among other requirements deemed necessary by the department, consideration of all of the following:
  - (1) Prevailing speeds as determined by traffic engineering measurements.
  - (2) Accident records.
- (3) Highway, traffic, and roadside conditions not readily apparent to the driver.
- (c) When conducting an engineering and traffic survey, local authorities, in addition to the factors set forth in paragraphs (1) to (3), inclusive, of subdivision (b) may consider all of the following:
- (1) Residential density, if any of the following conditions exist on the particular portion of highway and the property contiguous thereto, other than a business district:
- (A) Upon one side of the highway, within a distance of a quarter of a mile, the contiguous property fronting thereon is occupied by 13 or more separate dwelling houses or business structures.
- (B) Upon both sides of the highway, collectively, within a distance of a quarter of a mile, the contiguous property fronting thereon is occupied by 16 or more separate dwelling houses or business structures.
- (C) The portion of highway is longer than one-quarter of a mile but has the ratio of separate dwelling houses or business structures to the length of the highway described in either subparagraph (A) or (B).
- (2) Safety of bicyclists and pedestrians, with increased consideration for vulnerable pedestrian groups including children, seniors, persons with disabilities, users of personal assistive mobility devices, and the unhoused.

SEC. 2. Section 21400 of the Vehicle Code is amended to read:

- 21400. (a) The Department of Transportation shall, after consultation with local agencies and public hearings, adopt rules and regulations prescribing uniform standards and specifications for all official traffic control devices placed pursuant to this code, including, but not limited to, stop signs, yield right-of-way signs, speed restriction signs, railroad warning approach signs, street name signs, lines and markings on the roadway, and stock crossing signs placed pursuant to Section 21364.
- (b) The Department of Transportation shall, after notice and public hearing, determine and publicize the specifications for uniform types of warning signs, lights, and devices to be placed upon a highway by a person engaged in performing work that interferes with or endangers the safe movement of traffic upon that highway.
- (c) Only those signs, lights, and devices as are provided for in this section shall be placed upon a highway to warn traffic of work that is being performed on the highway.
- (d) Control devices or markings installed upon traffic barriers on or after January 1, 1984, shall conform to the uniform standards and specifications required by this section.
  - SEC. 3. Section 22352 of the Vehicle Code is amended to read:

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- 22352. The prima facie limits are as follows and shall be applicable unless changed as authorized in this code and, if so changed, only when signs have been erected giving notice thereof:
  - (a) Fifteen miles per hour:
- (1) When traversing a railway grade crossing, if during the last 100 feet of the approach to the crossing the driver does not have a clear and unobstructed view of the crossing and of any traffic on the railway for a distance of 400 feet in both directions along the railway. This subdivision does not apply in the case of any railway grade crossing where a human flagperson is on duty or a clearly visible electrical or mechanical railway crossing signal device is installed but does not then indicate the immediate approach of a railway train or car.
- (2) When traversing any intersection of highways if during the last 100 feet of the driver's approach to the intersection the driver does not have a clear and unobstructed view of the intersection and of any traffic upon all of the highways entering the intersection for a distance of 100 feet along all those highways, except at an intersection protected by stop signs or yield right-of-way signs or controlled by official traffic control signals.
  - (3) On any alley.
  - (b) Twenty-five miles per hour:
- (1) On any highway, in any business or residence district unless a different speed is determined by local authority or the Department of Transportation under procedures set forth in this code.
- (2) When approaching or passing a school building or the grounds thereof, contiguous to a highway and posted with a standard "SCHOOL" warning sign, while children are going to or leaving the school either during school hours or during the noon recess period. The prima facie limit shall also apply when approaching or passing any school grounds which are not separated from the highway by a fence, gate, or other physical barrier while the grounds are in use by children and the highway is posted with a standard "SCHOOL" warning sign. For purposes of this subparagraph, standard "SCHOOL" warning signs may be placed at any distance up to 500 feet away from school grounds.
- (3) When passing a senior center or other facility primarily used by senior citizens, contiguous to a street other than a state highway and posted with a standard "SENIOR" warning sign. A local authority may erect a sign pursuant to this paragraph when the local agency makes a determination that the proposed signing should be implemented. A local authority may request grant funding from the Active Transportation Program pursuant to Chapter 8 (commencing with Section 2380) of Division 3 of the Streets and Highways Code, or any other grant funding available to it, and use that grant funding to pay for the erection of those signs, or may utilize any other funds available to it to pay for the erection of those signs, including, but not limited to, donations from private sources.
  - SEC. 4. Section 22354 of the Vehicle Code is amended to read:
- 22354. (a) Whenever the Department of Transportation determines upon the basis of an engineering and traffic survey that the limit of 65 miles

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per hour is more than is reasonable or safe upon any portion of a state highway where the limit of 65 miles is applicable, the department may determine and declare a prima facie speed limit of 60, 55, 50, 45, 40, 35, 30, 25, 20, or 15 miles per hour, whichever is found most appropriate to facilitate the orderly movement of traffic and is reasonable and safe, which declared prima facie speed limit shall be effective when appropriate signs giving notice thereof are erected upon the highway.

- (b) This section shall become operative on the date specified in subdivision (c) of Section 22366.
  - SEC. 5. Section 22358 of the Vehicle Code is amended to read:
- 22358. (a) Whenever a local authority determines upon the basis of an engineering and traffic survey that the limit of 65 miles per hour is more than is reasonable or safe upon any portion of any street other than a state highway where the limit of 65 miles per hour is applicable, the local authority may by ordinance determine and declare a prima facie speed limit of 60, 55, 50, 45, 40, 35, 30, 25, 20, or 15 miles per hour, whichever is found most appropriate to facilitate the orderly movement of traffic and is reasonable and safe, which declared prima facie limit shall be effective when appropriate signs giving notice thereof are erected upon the street.
- (b) This section shall become operative on the date specified in subdivision (c) of Section 22366.
  - SEC. 6. Section 22358.6 is added to the Vehicle Code, to read:
- 22358.6. The Department of Transportation shall, in the next scheduled revision, revise and thereafter maintain the California Manual on Uniform Traffic Control Devices to require the Department of Transportation or a local authority to round speed limits to the nearest five miles per hour of the 85th percentile of the free-flowing traffic. However, in cases in which the speed limit needs to be rounded up to the nearest five miles per hour increment of the 85th-percentile speed, the Department of Transportation or a local authority may decide to instead round down the speed limit to the lower five miles per hour increment. A local authority may additionally lower the speed limit as provided in Sections 22358.7 and 22358.8.
  - SEC. 7. Section 22358.7 is added to the Vehicle Code, to read:
- 22358.7. (a) If a local authority, after completing an engineering and traffic survey, finds that the speed limit is still more than is reasonable or safe, the local authority may, by ordinance, determine and declare a prima facie speed limit that has been reduced an additional five miles per hour for either of the following reasons:
- (1) The portion of highway has been designated as a safety corridor. A local authority shall not deem more than one-fifth of their streets as safety corridors.
- (2) The portion of highway is adjacent to any land or facility that generates high concentrations of bicyclists or pedestrians, especially those from vulnerable groups such as children, seniors, persons with disabilities, and the unhoused.
- (b) (1) As used in this section, "safety corridor" shall be defined by the Department of Transportation in the next revision of the California Manual

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on Uniform Traffic Control Devices. In making this determination, the department shall consider highways that have the highest number of serious injuries and fatalities based on collision data that may be derived from, but not limited to, the Statewide Integrated Traffic Records System.

- (2) The Department of Transportation shall, in the next revision of the California Manual on Uniform Traffic Control Devices, determine what constitutes land or facilities that generate high concentrations of bicyclists and pedestrians, as used in paragraph (2) of subdivision (a). In making this determination, the department shall consider density, road use type, and bicycle and pedestrian infrastructure present on a section of highway.
- (c) A local authority may not lower a speed limit as authorized by this section until June 30, 2024, or until the Judicial Council has developed an online tool for adjudicating infraction violations statewide as specified in Article 7 (commencing with Section 68645) of Chapter 2 of Title 8 of the Government Code, whichever is sooner.
- (d) A local authority shall issue only warning citations for violations of exceeding the speed limit by 10 miles per hour or less for the first 30 days that a lower speed limit is in effect as authorized by this section.

SEC. 8. Section 22358.8 is added to the Vehicle Code, to read:

- 22358.8. (a) If a local authority, after completing an engineering and traffic survey, finds that the speed limit is still more than is reasonable or safe, the local authority may, by ordinance, retain the current speed limit or restore the immediately prior speed limit if that speed limit was established with an engineering and traffic survey and if a registered engineer has evaluated the section of highway and determined that no additional general purpose lanes have been added to the roadway since completion of the traffic survey that established the prior speed limit.
- (b) This section does not authorize a speed limit to be reduced by any more than five miles per hour from the current speed limit nor below the immediately prior speed limit.
- (c) A local authority shall issue only warning citations for violations of exceeding the speed limit by 10 miles per hour or less for the first 30 days that a lower speed limit is in effect as authorized by this section.

SEC. 9. Section 22358.9 is added to the Vehicle Code, to read:

- 22358.9. (a) (1) Notwithstanding any other law, a local authority may, by ordinance, determine and declare a 25 or 20 miles per hour prima facie speed limit on a highway contiguous to a business activity district when posted with a sign that indicates a speed limit of 25 or 20 miles per hour.
- (2) The prima facie limits established under paragraph (1) apply only to highways that meet all of the following conditions:
  - (A) A maximum of four traffic lanes.
- (B) A maximum posted 30 miles per hour prima facie speed limit immediately prior to and after the business activity district, if establishing a 25 miles per hour speed limit.
- (C) A maximum posted 25 miles per hour prima facie speed limit immediately prior to and after the business activity district, if establishing a 20 miles per hour speed limit.

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- (b) As used in this section, a "business activity district" is that portion of a highway and the property contiguous thereto that includes central or neighborhood downtowns, urban villages, or zoning designations that prioritize commercial land uses at the downtown or neighborhood scale and meets at least three of the following requirements in paragraphs (1) to (4), inclusive:
- (1) No less than 50 percent of the contiguous property fronting the highway consists of retail or dining commercial uses, including outdoor dining, that open directly onto sidewalks adjacent to the highway.
- (2) Parking, including parallel, diagonal, or perpendicular spaces located alongside the highway.
- (3) Traffic control signals or stop signs regulating traffic flow on the highway, located at intervals of no more than 600 feet.
  - (4) Marked crosswalks not controlled by a traffic control device.
- (c) A local authority shall not declare a prima facie speed limit under this section on a portion of a highway where the local authority has already lowered the speed limit as permitted under Sections 22358.7 and 22358.8.
- (d) A local authority shall issue only warning citations for violations of exceeding the speed limit by 10 miles per hour or less for the first 30 days that a lower speed limit is in effect as authorized by this section.
  - SEC. 10. Section 40802 of the Vehicle Code is amended to read:
  - 40802. (a) A "speed trap" is either of the following:
- (1) A particular section of a highway measured as to distance and with boundaries marked, designated, or otherwise determined in order that the speed of a vehicle may be calculated by securing the time it takes the vehicle to travel the known distance.
- (2) A particular section of a highway with a prima facie speed limit that is provided by this code or by local ordinance under paragraph (1) of subdivision (b) of Section 22352, or established under Section 22354, 22357, 22358, or 22358.3, if that prima facie speed limit is not justified by an engineering and traffic survey conducted within five years prior to the date of the alleged violation, and enforcement of the speed limit involves the use of radar or any other electronic device that measures the speed of moving objects. This paragraph does not apply to a local street, road, school zone, senior zone, or business activity district.
- (b) (1) For purposes of this section, a local street or road is one that is functionally classified as "local" on the "California Road System Maps," that are approved by the Federal Highway Administration and maintained by the Department of Transportation. It may also be defined as a "local street or road" if it primarily provides access to abutting residential property and meets the following three conditions:
  - (A) Roadway width of not more than 40 feet.
- (B) Not more than one-half of a mile of uninterrupted length. Interruptions shall include official traffic control signals as defined in Section 445.
  - (C) Not more than one traffic lane in each direction.
- (2) For purposes of this section, "school zone" means that area approaching or passing a school building or the grounds thereof that is

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contiguous to a highway and on which is posted a standard "SCHOOL" warning sign, while children are going to or leaving the school either during school hours or during the noon recess period. "School zone" also includes the area approaching or passing any school grounds that are not separated from the highway by a fence, gate, or other physical barrier while the grounds are in use by children if that highway is posted with a standard "SCHOOL" warning sign.

- (3) For purposes of this section, "senior zone" means that area approaching or passing a senior center building or other facility primarily used by senior citizens, or the grounds thereof that is contiguous to a highway and on which is posted a standard "SENIOR" warning sign, pursuant to Section 22352.
- (4) For purposes of this section, "business activity district" means a section of highway described in subdivision (b) of Section 22358.9 in which a standard 25 miles per hour or 20 miles per hour speed limit sign has been posted pursuant to paragraph (1) of subdivision (a) of that section.
- (c) (1) When all of the following criteria are met, paragraph (2) of this subdivision shall be applicable and subdivision (a) shall not be applicable:
- (A) When radar is used, the arresting officer has successfully completed a radar operator course of not less than 24 hours on the use of police traffic radar, and the course was approved and certified by the Commission on Peace Officer Standards and Training.
- (B) When laser or any other electronic device is used to measure the speed of moving objects, the arresting officer has successfully completed the training required in subparagraph (A) and an additional training course of not less than two hours approved and certified by the Commission on Peace Officer Standards and Training.
- (C) (i) The prosecution proved that the arresting officer complied with subparagraphs (A) and (B) and that an engineering and traffic survey has been conducted in accordance with subparagraph (B) of paragraph (2). The prosecution proved that, prior to the officer issuing the notice to appear, the arresting officer established that the radar, laser, or other electronic device conformed to the requirements of subparagraph (D).
- (ii) The prosecution proved the speed of the accused was unsafe for the conditions present at the time of alleged violation unless the citation was for a violation of Section 22349, 22356, or 22406.
- (D) The radar, laser, or other electronic device used to measure the speed of the accused meets or exceeds the minimal operational standards of the National Highway Traffic Safety Administration, and has been calibrated within the three years prior to the date of the alleged violation by an independent certified laser or radar repair and testing or calibration facility.
  - (2) A "speed trap" is either of the following:
- (A) A particular section of a highway measured as to distance and with boundaries marked, designated, or otherwise determined in order that the speed of a vehicle may be calculated by securing the time it takes the vehicle to travel the known distance.

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- (B) (i) A particular section of a highway or state highway with a prima facie speed limit that is provided by this code or by local ordinance under paragraph (1) of subdivision (b) of Section 22352, or established under Section 22354, 22357, 22358, or 22358.3, if that prima facie speed limit is not justified by an engineering and traffic survey conducted within one of the following time periods, prior to the date of the alleged violation, and enforcement of the speed limit involves the use of radar or any other electronic device that measures the speed of moving objects:
  - (I) Except as specified in subclause (II), seven years.
- (II) If an engineering and traffic survey was conducted more than seven years prior to the date of the alleged violation, and a registered engineer evaluates the section of the highway and determines that no significant changes in roadway or traffic conditions have occurred, including, but not limited to, changes in adjoining property or land use, roadway width, or traffic volume, 14 years.
- (ii) This subparagraph does not apply to a local street, road, or school zone, senior zone, or business activity district.